

US LHC Accelerator Project		Baseline Change Request
BCR Number	66	
WBS	1.1.4	IR Absorbers
Title	Change in ETC for IR Absorbers	
Change Control Level	2	
Originator	Joseph E. Rasson	
Date	17 May 2004	

Description of change

The purpose of this BCR is to close out the IR Absorber activities, WBS 1.1.4. The IR Quad Absorber (TAS) was completed, shipped and received at CERN in September 2003. The IR Neutral Beam Absorber (TAN) was completed, shipped and received at CERN in April 2004. This BCR takes into account the actual cost incurred to complete WBS 1.1.4 activities since the last BCR was approved in July 2003. The total cost adjustment for this BCR is \$138k. There is no change in deliverables as a result of this BCR. The cost increase in the EAC is mostly due to unexpected problems with a damaged TAN beam tube and an increase in the shipping cost. The major cost elements contributing to BCR 066 are:

WBS 1.1.4.1 TAS/TAN Fabrication

The TAS/TAN fabrication activities include beam tubes and shields fabricated at outside vendors and assembly and test at LBNL's facilities. One of the four completed TAN beam tubes had a virtual leak through a section of thin wall. A new replacement beam tube was manufactured, assembled and successfully tested. Another factor that contributed to the cost increase is a scope change to include procurement and qualification of four Helicoflex seals and clamping chain for the interconnect flange at the TAN 300 mm Dia. end. WBS 1.1.4.1 BCR increases the EAC by \$64k

WBS 1.1.4.2 Shipping

TAS/TAN shipping cost to CERN was updated based on actual invoiced cost submitted by the shipping company. The cost increase also includes the extra cost for fabricating reinforced crates and shipping beam tubes between LBNL and the e-beam welder facility. WBS 1.1.4.2 BCR increases the EAC by \$35k

WBS 1.1.4.3 EDIA

Cost increase in EDIA is due to incurred EDIA cost associated with the problems encountered with the damaged TAN beam tube and Helicoflex seal qualification. Also, additional EDIA effort was required to correct design deficiency of the TAS mechanical support system. WBS 1.1.4.3 BCR increases the EAC by \$39k

Reason for change

The reason for the change is to cover the incurred costs of the additional work specified in the "Description of Change" section above.

Impact on schedule

WBS 1.1.4 activities were completed and the hardware has already been shipped and received at CERN

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Impact on other sub-systems

None.

Impact on cost

BCR066 cost details are shown below. Table 1 is in as-spent \$k.

Table 1: Absorber Closeout. BAC change and new baseline budget (BAC) in as-spent dollars, including G&A and overhead.

WBS Num	Description	Closeout Budget (BCR066)	Revised BAC
1.1.4	IR Absorbers	138.0	5,419.8
1.1.4.1	FABRICATION	64.0	3,239.2
1.1.4.2	Shipping	35.0	212.1
1.1.4.3	EDIA	39.0	1,902.7
1.1.4.4	Instrumentation	-	65.8

Other impacts (ES&H, etc.)

None.

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Change Control Board recommendation (if required)

Approvals

_____	_____
WBS Level 3 Manager	Date
_____	_____
Laboratory Project Manager	Date
_____	_____
Change Control Board Chair	Date
_____	_____
US LHC Accelerator Project Manager	Date
_____	_____
DOE LHC Project Director	Date
_____	_____
Joint Oversight Group (DOE Co-Chair)	Date